

## **ABSTRACT**

### **“A STUDY OF HEART RATE VARIABILITY IN OFFSPRINGS OF TYPE 2 DIABETES MELLITUS”**

#### **BACKGROUND/INTRODUCTION:**

Offspring's of diabetic parents have an increased risk of developing diabetes especially if both parents are diabetic. Heart rate variability is a non invasive, sensitive method to analyze autonomic dysfunction's for assessment of sympathovagal balance. By conducting this research study cardiac autonomic dysfunction can be found out in diabetic and patients without diabetes.

#### **AIM AND OBJECTIVE:**

To analyze HRV in 30 offspring's of Type 2 Diabetes Mellitus who are not diabetics serve as a control group. This HRV analysis is compared with 30 offspring's of Type 2 Diabetes Mellitus who are diabetics serve as a test group.

#### **MATERIALS AND METHODS:**

This cross sectional study was conducted in the Department of Physiology, PSG IMSR Coimbatore. After taking informed consent, a sample size of 60 Type 2 Diabetes Mellitus was analyzed for HRV analysis within the age group of 30 – 70 years males and females were recruited from master health check up PSG IMSR, Coimbatore. 5 minute Lead II E.C.G was acquired using the R.R. Interval in time and frequency domain measures and R.R. Tachogram was plotted. Comparison of HRV with other parameters like lipid profile, blood glucose, glycosylated hemoglobin, B.M.I was found out between test and control groups.

#### **RESULTS:**

RMSSD, PNN50, HbA1C, blood glucose were found to be significant among control and cases by Independent sample t- test was used. To assess the relationship between the variables Pearson's Correlation was used and to find the significance in categorical data Chi- Square test was used. [‘P’ value is <0.05].

#### **CONCLUSION:**

In my study it indicates decreased parasympathetic activity. This sympathovagal imbalance can be prevented by lifestyle modification. Otherwise these people may be affected by complications of Diabetes Mellitus.

**KEYWORDS: Sympathovagal Imbalance, H.R.V, Diabetes Mellitus.**